

REMARKS

Reconsideration of the present application is respectfully requested in light of the above amendments to the application and the following remarks.

Claims 33-64, as renumbered, stand rejected under 35 U.S.C. §112, first paragraph. The present invention, as amended, provides a film or filament material that is essentially free of polystyrene homopolymer. Applicant respectfully submits that there is a distinction between the free polystyrene homopolymer and the polystyrene block of, for example, a styrenic block copolymer ("SBC") elastomer. Inherently, polystyrene homopolymer by itself is a plastic with a glass transition temperature of 105 °C, while the styrene in the SBC polymer has a glass transition temperature of 70 °C. The styrene blocks are coupled to the rubber block via co-valent bonds which gives the SBC polymers their elastic character. The copolymers used in the present invention were selected for, among other reasons, their high elasticity properties, which are adaptable for use in the breathable elastic material of the present invention. Polystyrene homopolymer is often used for strength and is known to those skilled in the art to reduce elasticity. Applicant respectfully submits herewith a page from the www.kraton.com website describing the Kraton® D and G polymer products and a published product brochure describing Kraton® polymers. As noted in the chart subtitled "Kraton® D Polymer Grades," for the various product identification numbers (in the column headings) are the elongation properties (row #3) for each product. The elongation properties are altered based on the styrene/rubber ratio, as noted in row #10 of that chart. The styrene referred to is the styrene block in the copolymer. There is no indication that any of the Kraton® polymers offered contain free polystyrene homopolymer.

The Kraton® material used in one embodiment of the present invention (e.g., Claim 35)

is essentially free of polystyrene in the SBC polymer. Applicant has amended the claims to reflect this distinction. Applicant respectfully submits that the polystyrene homopolymer free composition of the Kraton® SBC material was known to those skilled in the art at the time the application was filed as the Kraton® material was commercially available and printed literature on Kraton® material was available. Similarly, in another embodiment of the present invention, the polyurethane materials available as Estane® and as Morthane® are also known to those skilled in the art as being polystyrene homopolymer free. Accordingly, Applicant respectfully submits that the specification inherently discloses the makeup of the claimed material and the requirements of Section 112, first paragraph, have been met.

Claims 33-45, 52-57 and 61-64 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Berry in view of Miller. Applicant has amended the claims to clarify the language of the free polystyrene homopolymer.

Miller discloses a composition containing 5-49% polystyrene homopolymer and an amount of styrene block copolymer for use in producing an absorbent mat or towel for absorbing fluids, particularly oils. Miller's product application is completely different than the present invention's application and Miller is not focused on producing a product with maximum elasticity. The addition of polystyrene to the SBC polymer at 10-49%, as disclosed in Miller, would make the polymer more plastic than elastic (i.e., reducing desirable elasticity). Rather, Miller's product is focused on maximizing strength, absorbency and swellability (which is why the material contains cells). The range of polystyrene homopolymer taught by Miller, if used in the present invention, would likely reduce elasticity below that usable for the present intended application.

Applicant can produce product sheet from Kraton® according to the method of the present invention which demonstrates that there is no free polystyrene homopolymer present in the SBC polymers. The claims as amended reflect the specific component which is free of polystyrene. As such, Miller does not render the present invention obvious.

Berry discusses using a fabric that is stretchable to make a stretchable bandage. Berry also discusses stretching and bonding the film to the mechanically apertured facings, which is distinguishable from the present invention. The present invention uses an application of the material that is totally different from the bandage of Berry. The mechanically apertured facings of Berry would limit the elongation at break of the material of the present invention. It would not have been obvious to combine the apertured facings of the bandage of Berry and the free polystyrene homopolymer of Miller to achieve the material of the present invention having the claimed high degree of elasticity. There is also no motivation to combine Berry and Miller because Miller's material is intended for use in a high strength and absorbency mat or towel, not for a high elasticity-demanding application. The presence of polystyrene in Miller's disclosed intended use of the material is not a detriment, as it would be in the instant invention.

The Examiner states that Berry renders obvious the claimed elongation at break of 300%-600% because Berry discloses elastic strain before break of at least 100%. Berry does not teach a polystyrene homopolymer free copolymer that has the elasticity characteristics of the material of the present invention as claimed. The presence of polystyrene in Berry's material would limit the upper end of the elasticity range. Therefore, Applicant respectfully submits that Berry and Miller do not render the rejected claims obvious.

Claims 33-45, 53 and 61 stand rejected under 35 U.S.C. §102 (a and e) as being

anticipated by Miller. In response, Applicant respectfully submits that the claims as amended recite a material that is polystyrene homopolymer-free and that is not disclosed, taught or suggested by Miller.

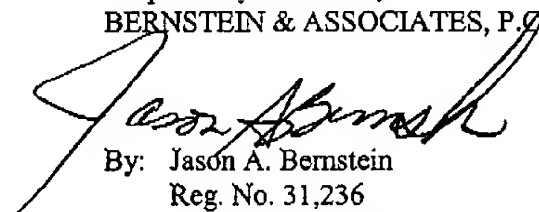
Claims 58-60 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Berry in view of Miller and further in view of Shah et al. The styrenic triblock polymer and polyurethanes of Shah et al. are not disclosed, taught or suggested as being polystyrene homopolymer free. The present invention as claimed is distinguishable and the cited combination of references does not render the present invention obvious.

Claims 46-47 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Berry in view of Miller and further in view of Cheong et al. The present invention provides a film having unique elasticity properties. Cheong discloses storage of agents in a microporous elastomeric structure, but the combination of cited references does not disclose, teach or suggest the claimed material having the elasticity characteristics and polystyrene homopolymer free block copolymer.

Therefore, Applicant submits that the amended claims overcome the Examiner's rejections and objections and are in condition for allowance, and Applicant respectfully requests the same. Should the Examiner have questions or suggestions which will put this application in line for allowance, he or she is requested to contact the undersigned attorney.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

70. (Amended) The breathable cellular elastomer film or filament material of Claim 375, wherein said cell opening agent is a material capable of forming openings in said film.
71. (Amended) The breathable cellular elastomer film or filament material of Claim 375, wherein said cell opening agent is an azodicarbonamide, water, a low boiling point solvent, or the gas liberated by the reaction of a mixture of an isocyanate and a polyol with water.
72. (Amended) The breathable cellular elastomer film or filament material of Claim 375, wherein said cells are open to the film surface, partially open or closed.
73. (Amended) The breathable cellular elastomer film or filament material of Claim 375, wherein said composite material has an average water vapor transmission rate of from about 300 to about 20,000 g/m²/24 hours.
74. (Amended) The breathable cellular elastomer film or filament material of Claim 375, wherein said composite material has an average water vapor transmission rate as measured by the INDA (Association of the Nonwoven Fabrics Industry) test procedure IST-70.4-99 of from about 300 to about 20,000 g/m²/24 hours.
75. (Amended) The film material of Claim 342, wherein said film material is formed by casting, extrusion or by mixing and dispensing to a moving belt methods.
76. (Amended) The film material of Claim 342, wherein said cell opening agent is an azodicarbonamide, water, a low boiling point solvent, a fluorocarbon, a mixture of an isocyanate and a polyol or mixtures thereof.
77. (Amended) The film material of Claim 234, wherein said cells are open to the film surface, partially open or closed.

78. (Amended) The material of Claim 234, wherein said material has cells created therein by a cell opening agent, at least one of said cells being closed, said closed cells containing a solid, liquid or gas capable of timed release.
79. (Amended) The breathable cellular elastomer film or filament material of Claim 1446, wherein said material is a filament material having cells created therein by a cell opening agent, said filament material being at least partially air permeable, capable of transmitting water vapor therethrough and being elongatable.
80. (Amended) The breathable cellular elastomer film or filament material of Claim 1446, wherein said solid, liquid or gas is released in response to an external stimulus.
81. (Amended) The breathable cellular elastomer film or filament material of Claim 1648, wherein said external stimulus is increased temperature from a user.
82. (Amended) The breathable cellular elastomer film or filament material of Claim 1648, wherein said solid, liquid or gas is active.
83. (Amended) The breathable cellular elastomer film or filament material of Claim 1648, wherein said solid, liquid or gas is capable of inhibiting yeast filament formation.
84. (Amended) The breathable cellular elastomer film or filament material of Claim 133, further comprising at least one layer of an extensible material laminated to said elastomer material, said elastomer material having at least one aperture defined therein created by a cell opening agent.
85. (Amended) The breathable cellular elastomer film or filament material of Claim 1237, wherein said film is formed by casting or extrusion methods.

86. (Amended) The breathable cellular elastomer film material of Claim 234, further comprising at least one layer comprised of an extensible material laminated to said elastomeric film to form a laminate, said elastomeric film having apertures created therein by a cell opening agent, said laminate being formed into a personal care product.
87. (Amended) The breathable cellular elastomer film or filament material of Claim 2255, wherein said laminate has an average water vapor transmission rate as measured by the INDA (Association of the Nonwoven Fabrics Industry) test procedure IST-70.4-99 of from about 300 to about 20,000 g/m²/24 hours.
88. (Amended) The breathable cellular elastomer film or filament material of Claim 2255, wherein said laminate is formed into a bandage, a wound dressing, a diaper, an incontinence garment, a panty shield or liner, a perspiration shield a surgical gown or industrial workwear.
89. (Reiterated) A breathable cellular elastomer material having cells created therein by a cell opening agent, said material being at least partially air permeable, capable of transmitting water vapor therethrough and being elongatable, wherein said material is incorporated into a laminate material produced by a method, comprising:
 - a) providing a layer of a spunbond material;
 - b) providing a layer of an elastomeric film being essentially polystyrene free and having apertures formed therein by mixing a polymer material with a cell opening agent to form a mixture and extruding said mixture through a die such that apertures are formed therein, said apertures comprising cells, at least a portion of said cells being closed; and,
 - c) laminating said elastomeric film and said spunbond.

90. (Reiterated) A breathable cellular elastomer material having cells created therein by a cell opening agent, said material being essentially polystyrene free and at least partially air permeable, capable of transmitting water vapor therethrough and being elongatable, wherein said material is incorporated into a laminate material produced by a method, comprising:
- a) providing an isocyanate material;
 - b) providing a polyol material;
 - c) providing a catalyst material;
 - d) providing an effective amount of water;
 - e) mixing said polyol material, catalyst material and water to form a mixture;
 - f) mixing the mixture of step e) with said isocyanate material to form a second mixture;
 - g) dispensing said second mixture through a die head onto a surface to form a cellular foam at least a portion of said foam having closed cells; and,
 - h) laminating said foam to at least one layer of a non-extensible material so as to form a breathable elastomeric material.
91. (Twice Amended) The material of Claim 2658, further comprising curing said foam.
92. (Amended) The material of Claim 2658, further comprising adjusting the polyol functionality to adjust the adhesive level desired.
93. (Reiterated) A breathable cellular elastomer film or filament material having cells created therein by a cell opening agent, said material being at least partially air permeable, capable of transmitting water vapor therethrough and being elongatable, wherein having apertures formed therein by a process, comprising:

- a) providing an elastomeric essentially polystyrene free polymer material;
 - b) providing a cell opening material capable of releasing a gas;
 - c) mixing said polymer material and said cell opening material to form a mixture;
 - and,
 - d) extruding said mixture through an extrusion die such that said cell opening material produces a gas whereby apertures are formed at least partially within the extruded material, at least a portion of said apertures being closed cells.
94. (Reiterated) A laminate material, comprising:
- a) a layer of an elastomer film or filament material being essentially polystyrene free having cells created therein by a cell opening agent; at least a portion of said cells being closed, said material being breathable and having an elongation at break of from about 300% to about 600%; and,
 - b) at least one layer of a spunbond material laminated to said elastomer film or filament material.
95. (Reiterated) A personal care article, comprising:
- a) a layer of an elastomer film or filament material being essentially polystyrene free having cells created therein by a cell opening agent, at least a portion of said cells being closed, said material being breathable and having an elongation at break of from about 300% to about 600%; and,
 - b) at least one layer of a spunbond material laminated to said elastomer film or filament material.
96. (Reiterated) A stretchable top sheet for use in an article worn to manage fluids, comprising:

- a) a layer of an elastomer film or filament material being essentially polystyrene free and having cells created therein by a cell opening agent, at least a portion of said cells being closed, said material being breathable and having an elongation at break of from about 300% to about 600%; and,
- b) at least one layer of a spunbond material laminated to said elastomer film or filament material.